

Title (en)

POSITIVE ELECTRODE MIXTURE SLURRY FOR LITHIUM SECONDARY BATTERIES, AND POSITIVE ELECTRODE AND LITHIUM SECONDARY BATTERY THAT USE SAID SLURRY

Title (de)

SCHLAMM AUS POSITIVELEKTRODENMISCHUNG FÜR LITHIUMSEKUNDÄRBATTERIEN SOWIE POSITIVELEKTRODE UND LITHIUMSEKUNDÄRBATTERIE MIT DIESEM SCHLAMM

Title (fr)

SUSPENSION POUR MÉLANGE D'ÉLECTRODE POSITIVE DE BATTERIE SECONDAIRE AU LITHIUM, ÉLECTRODE POSITIVE ET BATTERIE SECONDAIRE AU LITHIUM QUI UTILISENT LADITE SUSPENSION

Publication

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Application

EP 10741253 A 20100210

Priority

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Abstract (en)

[origin: EP2398095A1] The invention provides a stable positive-electrode mixture slurry that is not subject to gelation, a positive electrode with abundant flexibility, and a lithium secondary battery with excellent battery characteristics. The slurry comprises a positive-electrode active material, a binder, and an organic solvent, the positive-electrode active material is a lithium-containing complex metal oxide represented by Formula: $\text{Li}_x \text{M}_1^y \text{M}_2^{1-y} \text{O}_2$ (wherein $0.4 \leq x \leq 1$; $0.3 \leq y \leq 1$; M 1 is at least one selected from Ni or Mn; and M 2 is at least one selected from Co, Al, or Fe); and the binder comprises a fluorine-containing polymer represented by Composition Formula: $(\text{VDF})_m (\text{TFE})_n (\text{HFP})_l$ (wherein VDF is a structural unit from vinylidene fluoride; TFE is a structural unit from tetrafluoroethylene; HFP is a structural unit from hexafluoropropylene; and $0.45 \leq m \leq 1$; $0 \leq n \leq 0.5$; and $0 \leq l \leq 0.1$, and $m + n + l = 1$).

IPC 8 full level

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CPC (source: EP KR US)

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Citation (search report)

- [XD] EP 0964464 A1 19991215 - DAIKIN IND LTD [JP]
- [XI] US 2006286457 A1 20061221 - SASAKI TAKESHI [JP]
- [X] JP 2008021644 A 20080131 - MATSUSHITA ELECTRIC IND CO LTD
- [X] CA 2535064 A1 20070801 - HYDRO QUEBEC [CA]
- [A] WO 2008079393 A1 20080703 - DU PONT [US], et al
- See references of WO 2010092976A1

Cited by

EP4080617A4; EP3863081A4; US12021233B2; US9324993B2

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